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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,496	03/26/2004	Hideyuki Shishitani	249-335	7877
23117	7590	08/30/2006		
NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				
EXAMINER WOLLSCHLAGER, JEFFREY MICHAEL				
ART UNIT		PAPER NUMBER		
1732				

DATE MAILED: 08/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

#4

**Office Action Summary**

Application No.

10/809,496

Applicant(s)

SHISHITANI ET AL.

Examiner

Jeff Wollschlager

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5/25/04; 8/23/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Drawings*

New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because Figure 1(D) contains a misspelled word. "Press-farming" should be rendered "Press-Forming". Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: (11) (12) and (13). Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The disclosure is objected to because of the following informalities: The word "an product" should be rendered "a product" at the end of paragraph [0022] (U.S. Patent Application Publication 2004/0188879). Applicant is encouraged to review the specification for similar informalities. Appropriate correction is required.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Process for Producing A Separator for A Fuel Cell.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite because the recitations regarding cutting and aligning are unclear. For example, it is noted that a "front surface" is referred to in both the cutting and aligning recitations, yet it is unclear, as claimed, whether these are the same surfaces. A similar lack of clarity exists for the back surface. The claim also refers to cut surface (singular) and cut surfaces (plural). It is unclear what limiting effect the different terms have on the claim or whether it is merely a misspelling. There are

multiple surfaces of the strips that could be referred to as a front surface, back surface, or cut surface (elements (10), (20), (11), (12) and (13)).

Further, in the aligning recitation “as a whole a plate shape” is formed. It is unclear what limiting effect the word “whole” has on the claim. Further, in the press-forming recitation the “whole preformed product pieces” are press-formed. The limiting effect of this recitation is unclear. For the purposes of examination it is understood that aligned strips are disposed adjacently, in contact with each other, and are all pressed at the same time to form a “separator shape”. It is noted that in view of the specification it appears the intended limiting effect of the cutting and aligning recitations is to require the strips be turned 90 degrees (Figure 1(B) and 1(C)). However, as currently presented, it is unclear what the actual limiting effect is of the claim.

Claim 2 is similar to claim 1. As such, the rejection described above also applies to claim 2. Additionally, claim 2 recites, “each constituted by the cuts surfaces and partially by the original front and back surfaces”. It is unclear how the surfaces of the plate are constituted by the cut surface and partially by “the original” front and back surfaces. It is unclear whether the surfaces are constituted partially by the cut surfaces and partially by the original front and back surfaces or if the intention is to have another limiting effect. Further, there is a lack of antecedent basis for “the original front and back surfaces” in the claims.

Claim 5, recites “further comprising”. For the purposes of examination the recitation is understood as “further comprises”.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Nippe et al. (U.S. Patent 3,819,413; issued June 25, 1974).

Regarding claims 1 and 2, Nippe et al. teach a process for producing a fuel cell component comprising: providing a conductive resin composition comprising a resin and an electrically anisotropic conductive filler (col. 2, lines 64-66; col. 3, lines 42-44); press-molding the conductive resin composition under pressure without heating to obtain a preformed product in the form of a flat plate (col. 4, lines 57-67; Figure 2a); cutting the preformed product parallel to its edge face by a predetermined width to obtain strip-form preformed product pieces having a front surface, a back surface, and a cut surface (Figure 2b); aligning the strip-form preformed product pieces so as to form as a whole a plate shape having a front surface and a back surface each constituted by the cut surfaces of the strip form preformed product pieces and by the original front and back surfaces (Figure 2c); press-forming the aligned whole preformed product pieces into a “separator shape” by welding an armor coating to hold the structure together (col. 7, lines 59-67). It is noted that the temperature required to weld an armor coating would inherently be higher than the curing temperature of the resin. It is further noted that the

claim recitation "separator shape" is very broad. As such, it is anticipated by the Nippe et al. reference.

As to claims 3 and 4, Nippe et al. teach the anisotropic conductive filler is fibrous graphite (col. 3, lines 43-45).

As to claim 5, Nippe et al. further teach the conductive resin comprises electrically isotropic conductive filler, such as carbon black (col. 3, lines 15-18).

### ***Conclusion***

All claims are rejected.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ishioka et al. (U.S. Patent 6,855,407) clarifies the scope of the word graphite in the analogous art showing that it includes a clearly envisaged selection of materials including "artificial graphite, flake graphite, vein graphite, natural graphite, expanded graphite" (col. 2, lines 7-16).

Takano et al. (U.S. Patent 6,544,680) and Ottinger et al. (U.S. Patent 6,746,771) employ the same materials analogously.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Wollschlager whose telephone number is 571-272-8937. The examiner can normally be reached on Monday - Thursday 7:00 - 4:45, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JW

Jeff Wollschlager  
Examiner  
Art Unit 1732

August 23, 2006

  
CHRISTINA JOHNSON  
PRIMARY EXAMINER

8/24/06